

**Appendix A:**

**CONDITIONS OF APPROVAL FOR THE CBNG APPLICATION**  
**FOR PERMIT TO DRILL**

POD Name: Caliente POD

Operator: Yates Petroleum Corporation

Field Office: Buffalo Field Office  
Address: 1425 Fort Street  
Buffalo, Wyoming 82834  
Office Telephone Number: 307-684-1100

List of Wells:

	Well Name	Well #	Qtr/Qtr	Section	TWP	RNG	Lease #
1	Heat CS Federal	#9	NENE	29	45N	76W	WWY147323
2	Heat CS Federal	#10	NENW	29	45N	76W	WWY147323
3	Heat CS Federal	#12	SWNE	29	45N	76W	WWY147323
4	Heat CS Federal	#13	NESE	29	45N	76W	WWY147323
5	Heat CS Federal	#16	SWSE	29	45N	76W	WWY147323
6	Heat CS Federal	#19	SWNW	30	45N	76W	WWY147323
7	Heat CS Federal	#22	NESW	30	45N	76W	WWY147323
8	Heat CS Federal	#23	SWSW	30	45N	76W	WWY147323
9	Heat CS Federal	#24	SWSE	30	45N	76W	WWY147323
10	Heat CS Federal	#25	NESE	33	45N	76W	WWY147323
11	Heat CS Federal	#26	NESW	33	45N	76W	WWY147323
12	Heat CS Federal	#27	SWSW	33	45N	76W	WWY147323
13	Heat CS Federal	#28	SWSE	33	45N	76W	WWY147323
14	Caliente CS Federal	#1	NWNE	32	45N	76W	WYW149968
15	Caliente CS Federal	#2	SENE	32	45N	76W	WYW149968

List of Impoundments:

	Facility Name / Number	Qtr/Qtr	Sec	TWP	RNG
1	Scald #1 Injector Well	SENE	31	45	76
2	Scald #2 Injector Well	SESE	32	45	76
3	Loop Road Pit	SWNE	31	45	76

The spud date will be reported electronically, (see website location below) to the Authorized Officer  
24 HOURS BEFORE SPUDDING, unless otherwise required in site specific conditions of approval.

Spud Notice Site:

[http://www.wy.blm.gov/minerals/og/og\\_notices/spud\\_notice.php](http://www.wy.blm.gov/minerals/og/og_notices/spud_notice.php)

## **SITE SPECIFIC**

### **Surface Use**

1. For safety of travel, to reduce rutting and increase traction, place a minimum average of 4 inches of aggregate on road segments where grades exceed 8%.
2. To protect erodible soils, all engineered road segments should be completed, including any culverts, low water crossings and required surfacing, before the drilling rig or other drilling equipment moves onto the pad.
3. A company licensed professional engineer(s) will certify that the construction of engineered roads meet the design criteria(s) and are built Bureau standards.
4. Provide erosion control along pipeline routes to achieve successful reclamation. Erosion control features include water bars, mulching, straw crimping, or erosion blankets, etc.
5. Except cross country pipeline corridors expressly authorizing a road after construction of the facility is completed, the holder of such corridor or right-of-way shall not use the cross country pipeline corridors or right-of-way as a road for purposes other than routine maintenance of the corridor function itself or right-of-way purpose as determined necessary by the authorized officer. The authorized officer will clarify or consider exceptions either telephonically or by application of a Sundry Notice, Form 3160-5.
6. Erosion control fabric used for reclamation of steep slopes should be photodegradable or biodegradable. Non-photodegradable/biodegradable erosion control fabric will be removed from the federal leases following establishment of a self-perpetuating native plant community and sustained soil stability.
7. In the absence of manufacture's specifications included in the operator's MSUP, erosion control fabric will be installed as follows:
  - a. The fabric will be 'keyed' into the slope by digging a small trench at the top of the slope;
  - b. Lay the top end of the material into the trench to line it;
  - c. To line it the edge is folded underneath itself and then it is secured using staples;
  - d. The trench is then filled in to the previous soil level; and Fabric should be overlapped no less than 0.3 meter on edges and stapled on 1 meter spacing and at every seam.
8. Stabilization of steep slopes greater than 4:1 will include but is not limited to the following components to minimize soil erosion and loss of seed:
  - a. Surface roughening/pocking or scarification perpendicular to the slope;
  - b. Install slope breakers such as waddles and water bars at the appropriate spacing;
  - c. Seed with appropriate seed mix; and
  - d. Apply straw mulch or bio/photodegradable erosion control fabric on highly erodible soils.
9. Straw/Excelsior wattles are most effective as erosion control if applied on slopes less than 3:1. The table below is an example of appropriate spacing of straw or excelsior wattles commonly applied as slope breakers recommended by American Excelsior Company. Tighter spacing may be required based on soil type and seasonal precipitation. In the absence of manufacture's specifications included in the operator's MSUP, the minimum spacing requirements will be as follows:

<b>Slope</b>	<b>6-inch waddle</b>	<b>9-inch waddle</b>	<b>12-inch waddle</b>
≤4:1	20 feet	40 feet	60 feet
3:1	15 feet	30 feet	45 feet
2:1V	10 feet	20 feet	30 feet
≥1:1	5 feet	10 feet	15 feet

10. The Caliente project area is dominated by sensitive soils features that exhibit severe erosion potential that will require disturbed areas to be stabilized (stabilization efforts may include mulching, matting, soil amendments, et. cetera) in a manner which eliminates accelerated erosion until a self-perpetuating native plant community reclaims the site in accordance with the Wyoming Reclamation Policy. Stabilization efforts shall be finished within 30 days of the initiation of construction activities or if unable to finish stabilization efforts within 30 days, the operator shall apply for an extension via Sundry Notice, Form 3160-5, that specifies work to be accomplished and a schedule to finish the stabilization. This applies to all surface disturbances within the entire Caliente project area.

### **Cultural**

1. Per the Pumpkin Buttes Programmatic Agreement between the BLM and the Wyoming State Historic Preservation Officer Regarding Mitigation of Adverse Effects to the Pumpkin Buttes Traditional Cultural Property from Anticipated Federal Minerals Development in Campbell County, Wyoming; Stipulations II; Yates will instruct all employees, contractors, subcontractors, and any additional parties involved with on the ground operations of their project to avoid the Pumpkin Buttes TCP.
2. Per the Programmatic Agreement between the BLM and the Wyoming State Historic Preservation Officer Regarding Mitigation of Adverse Effects to the Pumpkin Buttes Traditional Cultural Property from Anticipated Federal Minerals Development in Campbell County, Wyoming; Appendix A-G; Yates will operate under mitigation measures found in appendices A-G of the PA during all phases (drilling, construction, operation, reclamation, etc) of all approved wells in the Caliente POD and their associated infrastructure (new surface disturbance to junction with existing disturbance).

### **Wildlife**

#### **Greater Sage-Grouse**

1. No surface disturbing activities are permitted during Greater Sage-Grouse breeding and nesting period (March 15 – June 30), for the entire Caliente POD.
2. For any surface-disturbing activities proposed in sagebrush shrublands, the operator will conduct clearance surveys for Greater Sage-Grouse breeding activity during the Greater Sage-Grouse's breeding season before initiating the activities. The surveys must encompass all sagebrush shrublands within 0.5 miles of the proposed surface disturbance activities. This will apply to all proposed or approved surface disturbances. All survey results shall be submitted in writing to a Buffalo BLM biologist no later than July 31 of the current year. This condition will be implemented on an annual basis for the duration of surface disturbing activities. If a previously unknown lek is identified during surveys (April 1-May 7), a Buffalo BLM biologist shall be notified.
3. Disruptive activities are restricted on or within one quarter (0.25) mile radius of the perimeter of occupied or undetermined Greater Sage-Grouse leks to the hours of 9:00am – 3:00pm from March 15 – May 15.
4. Yates shall install signs at either end of the road where it enters the 0.25 mile radius on the lek limiting use of the road to the times described above. The signs will be no taller than 4 feet in height. This condition will apply to use of the North #3 access road and maintenance of the utility corridor,

occurring within 0.25 miles of the Christensen Ranch 5 Lek for the duration of the surface disturbance.

### Mountain Plover

The following conditions will alleviate impacts to mountain plovers:

1. No surface-disturbing activities shall occur within 0.25 mile of potential mountain plover nesting habitat, annually, from March 15 through July 31, prior to a nesting survey. This timing limitation will be in effect unless surveys determine the habitat to be unoccupied. This timing limitation will affect the Heat CS Federal #28 well and its associated infrastructure.
  - a. Mountain plover nesting surveys shall be conducted by a biologist following the most current USFWS Mountain Plover Survey Guidelines. All survey results shall be submitted in writing to a Buffalo BLM biologist and approved prior to surface disturbing activities.
2. If a plover is observed, no surface-disturbing activities shall occur within 0.25 miles of the prairie dog colony from March 15 through July 31.

### Raptors

The following conditions will alleviate impacts to raptors:

1. No surface-disturbing activity shall occur within 0.5 mile of all identified raptor nests from February 1 through July 31, annually, prior to a raptor nest occupancy survey for the current breeding season. This timing limitation will affect the following wells and infrastructure:

Township/Range	Section	Wells and Infrastructure
T45N R76W	23	Access road connecting wells: Heat CS Federal #s 2 and 3.
	26	Well locations: Heat CS Federal #1 Access road and utility corridor to Heat CS Federal #1 location. Access road connecting the wells: Heat CS Federal #s 2 and 3
	28	Access road North #1 Road.
	29	Well locations for wells: Heat CS Federal #s 9, 10, 12, 13, and 16 All access roads and utility corridors within the E half and NENW Quarter/Quarter of Section 29.
	30	Well locations for wells: Heat CS Federal #s 17 and 18 All associated access roads and utility corridors within the NE and NW quarters of Section 30.
	32	Well locations for wells: Caliente CS Federal #s 1, 2, Scald #2 Injector Well All access roads and utility corridors within the entire Section 32.
	33	Well locations for wells: Heat CS Federal #s 25, 26, 27, and 28 North #1 Road through the entire Section 33. All access roads and utility corridors within the S half of the Section 33.

2. Surveys to document nest occupancy shall be conducted by a biologist following BLM protocol, between April 15 and June 15. All survey results shall be submitted in writing to a Buffalo BLM biologist and approved prior to surface-disturbing activities. Surveys outside this window may not depict nesting activity. If a survey identifies active raptor nests, a 0.5 mile timing buffer will be implemented. The timing buffer restricts surface-disturbing activities within 0.5 mile of occupied raptor nests from February 1 to July 31.

3. If an undocumented raptor nest is located during project construction or operation, the Buffalo Field Office (307-684-1100) shall be notified within 24 hours.

### **Western Burrowing Owls**

The following conditions will alleviate impacts to burrowing owls:

1. No surface-disturbing activities shall occur within 0.25 mile of all identified prairie dog colonies, from April 15 through August 31, annually, prior to a burrowing owl survey. This timing limitation will be in effect unless surveys determine that no burrowing owls are present. A 0.25 mile buffer will be applied if a burrowing owl nest is identified. This timing limitation will affect the Heat CS Federal #28 well and associated infrastructure.
  - a. Surveys shall be conducted by a biologist following BLM protocol. All survey results shall be submitted in writing to a Buffalo BLM biologist and approved prior to surface disturbing activities.
  - b. If a burrowing owl nest is located during project construction or operation, the Buffalo Field Office (307-684-1100) shall be notified within 24 hours.

### **STANDARD**

#### **Wildlife**

1. The Companies will locate compressor stations so that noise from the stations at nearby Greater Sage Grouse or sharp-tailed grouse display grounds does not exceed 49 decibels (10 dBA above background noise) at the display ground.
2. The Companies will locate aboveground power lines, where practical, at least 0.5 mile from any Greater Sage-Grouse breeding or nesting grounds to prevent raptor predation and Greater Sage-Grouse collision with the conductors. Power poles within 0.5 mile of any Greater Sage-Grouse breeding ground will be raptor-proofed to prevent raptors from perching on the poles.
3. The Companies will locate facilities so that noise from the facilities at any nearby Greater Sage-Grouse display grounds does not exceed 49 decibels (10 dBA above background noise) at the display ground.

#### **General**

1. A pre-construction field meeting shall be conducted prior to beginning any dirt work approved under this POD. The operator shall contact the BLM Authorized Officer or Meleah Corey 307-684-1070 at least 4-days prior to beginning operations so that the meeting can be scheduled. The operator is responsible for having all contractors present (dirt contractors, drilling contractor, pipeline contractor, project oversight personnel, etc.) including the overall field operations superintendent, and for providing all contractors copies of the approved POD, project map and BLM Conditions of Approval pertinent to the work that each will be doing.
2. If any cultural values [sites, artifacts, human remains (Appendix L FEIS and ROD)] are observed during operation of this lease/permit/right-of-way, they will be left intact and the Buffalo Field Manager notified. The authorized officer will conduct an evaluation of the cultural values to establish appropriate mitigation, salvage or treatment. The operator is responsible for informing all persons in the area who are associated with this project that they will be subject to prosecution for knowingly disturbing historic or archaeological sites, or for collecting artifacts. If historic or archaeological materials are uncovered during construction, the operator is to immediately stop work that might further disturb such materials, and contact the authorized BLM officer (AO). Within five working days the AO will inform the operator as to:

- whether the materials appear eligible for the National Register of Historic Places;
  - the mitigation measures the operator will likely have to undertake before the site can be used (assuming in situ preservation is not necessary); and,
  - a time-frame for the AO to complete an expedited review under 36 CFR 800.11 to confirm, through the State Historic Preservation Officer, that the findings of the AO are correct and that mitigation is appropriate. The AO will provide technical and procedural guidelines for the conduct of mitigation. Upon verification from the AO that the required mitigation has been completed, the operator will then be allowed to resume construction measures.
3. If paleontological resources, either large or conspicuous, and/or a significant scientific value are discovered during construction, the find will be reported to the Authorized Officer immediately. Construction will be suspended within 250 feet of said find. An evaluation of the paleontological discovery will be made by a BLM approved professional paleontologist within five (5) working days, weather permitting, to determine the appropriate action(s) to prevent the potential loss of any significant paleontological values. Operations within 250 feet of such a discovery will not be resumed until written authorization to proceed is issued by the Authorized Officer. The applicant will bear the cost of any required paleontological appraisals, surface collection of fossils, or salvage of any large conspicuous fossils of significant scientific interest discovered during the operation.
  4. Please contact BLM, Natural Resource Specialist, at (307) 684-1100, Bureau of Land Management, Buffalo, if there are any questions concerning the following surface use COAs.
  5. The first well drilled to each targeted coal zone will be designated as the POD reference well. Designated reference wells must have the ability to be sampled at the wellhead. Water quality samples will be collected by the operator and submitted for analysis using WDEQ NPDES criteria within 30-60 days of initial water production. Results of the analysis will be submitted to the BFO-BLM Authorized Officer as soon as they become available.

## **DRILLING AND PRODUCTION OPERATIONS**

1. The operator shall complete wells (case, cement and under ream) as soon as possible, but no later than 30 days after drilling operations, unless an extension is given by the BLM Authorized Officer.
2. If in the process of air drilling the wells there is a need to utilize mud, all circulating fluids will be contained either in an approved pit or in an aboveground containment tank. The pit or containment tank will be large enough to safely contain the capacity of all expected fluids without danger of overflow. Fluid and cuttings will not be squeezed out of the pit, and the pit will be reclaimed in an expedient manner.

### **Well Control Equipment**

1. The flow line shall be a minimum of 30 feet from the well bore and securely anchored. The 30-foot length of line is a minimum and operators must make consideration for increasing this length for topography and/or wind direction.
2. The flow line shall be a straight run.
3. The flow line must be constructed from non-flammable material.
4. All cuttings and circulating medium shall be directed to and contained in a reserve pit.
5. The nearest edge of the pits shall be a minimum of 25' from the rig.

6. A minimum of 2' of freeboard shall be maintained in the pits at all times.
7. The authorized officer may modify these requirements at any time if it is determined that increased pressure control is deemed necessary.
8. Verbal notification shall be given to the Authorized Officer at least 24 hours before formation tests, BOP tests, running and cementing casing, and drilling over lease expiration dates.

#### **Cement Program**

1. If there are indications of inadequate primary cementing of the surface, intermediate, or production casing strings; such as but not limited to no returns to surface, cement channeling, fallback or mechanical failure of equipment, the operator will evaluate the adequacy of the cementing operations. This evaluation will consist of running a cement bond log (CBL) or an alternate method approved by the Authorized Officer (AO) no sooner than 12 hours and no later than 24 hours from the time the cement was first pumped.
2. If the evaluation indicates inadequate cementing, the operator shall contact a BLM Buffalo Field Office Petroleum Engineer for approval of remedial cementing work.
3. The adequacy of the remedial cementing operations shall be verified by a cement bond log (CBL) or an alternate method approved by the Authorized Officer (AO). All remedial work shall be completed and verified prior to drilling out the casing shoe or perforating the casing for purposes other than remedial cementing.
4. The cement mix water used must be of adequate quality so as not to degrade the setting properties of the cement. Any water that does not meet municipal quality water standards shall be tested by mixing the water and cement in a lab and comparing the results to the municipal quality water mix results. If the results show that the cement qualities are not the same or greater, then the non-municipal water shall not be used for mixing cement in the well.

#### **Production Equipment**

1. Other actions such as off-lease measurement, commingling, allocation, etc. shall be approved via a Notice of Intent Sundry (Form No. 3160-5). Submission of additional information in the POD shall not be construed as permission for these items. If the operator wishes to utilize off-lease gas measurement for wells approved in this POD, they are required to obtain approval via a Notice of Intent Sundry (Form No. 3160-5) prior to any gas production.

#### **Well and POD Building Identification**

1. From the time a well pad is constructed or a well is spudded (if no well pad needed), until abandonment, all well locations must be properly identified with a legible sign. The sign will include the well name and number, operator name, lease number, and the surveyed location.
2. At each POD building site where federal wells are metered, the operator is required to maintain a legible sign displayed in a conspicuous place. This sign is required to be in place at the time metering goes online. The sign shall include: POD name, operator, federal well names and numbers, federal lease numbers being metered at the POD building, and surveyed location of the building.

#### **Protection of Fresh Water Resources**

1. All oil and gas operations shall be conducted in a manner to prevent the pollution of all freshwater resources. All fresh waters and waters of present or probable future value for domestic, municipal, commercial, stock, or agricultural purposes will be confined to their respective strata and shall be adequately protected. Special precautions will be taken to guard against any loss of artesian water

from the strata in which it occurs and the contamination of fresh water by objectionable water, oil, condensate, gas, or other deleterious substance to such fresh water.

#### **Miscellaneous Conditions**

1. Any changes to the approved drilling plan and/or these conditions of approval shall be approved by the BLM-Buffalo Field Office Petroleum Engineer prior to being implemented.  
After hour's numbers: Supervisory Petroleum Engineer: Matthew Warren, Cell: 307-620-0103
2. If any cores are collected, a copy of all analysis performed shall be submitted to the BLM-Buffalo Field Office Petroleum Engineer.

#### **SURFACE USE STANDARD**

##### **Construction**

1. Construction and drilling activity will not be conducted using frozen or saturated soil material during periods when watershed damage or excessive rutting is likely to occur.
2. Remove all available topsoil from constructed well locations including areas of cut and fill, and stockpile at the site. Topsoil will also be salvaged for use in reclamation on all other areas of surface disturbance (roads, pipelines, etc.). Clearly segregate topsoil from excess spoil material. Any topsoil stockpiled for one year or longer will be signed and stabilized with annual ryegrass or other suitable cover crop.
3. The operator will not push soil material and overburden over side slopes or into drainages. All soil material disturbed will be placed in an area where it can be retrieved without creating additional undue surface disturbance and where it does not impede watershed and drainage flows.
4. Construct the backslope no steeper than ½:1, and construct the foreslope no steeper than 2:1, unless otherwise directed by the BLM Authorized Officer.
5. Maintain a minimum 20-foot undisturbed vegetative border between toe-of-fill of pad and/or pit areas and the edge of adjacent drainages, unless otherwise directed by the BLM Authorized Officer.
6. To minimize electrocution potential to birds of prey, all overhead electrical power lines on BLM surface will be constructed to standards identified by the Avian Power Line Interaction Committee (2006).
7. The reserve pit will be oriented to prevent collection of surface runoff. After the drilling rig is removed, the operator may need to construct a trench on the uphill side of the reserve pit to divert surface drainage around it. If constructed, the trench will be left intact until the pit is closed.
8. The reserve pit will be lined with an impermeable liner if permeable subsurface material is encountered. An impermeable liner is any liner having a permeability less than 10<sup>-7</sup> cm/sec. The liner will be installed so that it will not leak and will be chemically compatible with all substances that may be put in the pit. Liners made of any man-made synthetic material will be of sufficient strength and thickness to withstand normal installation and pit use. In gravelly or rocky soils, a suitable bedding material such as sand will be used prior to installing the liner.
9. The reserve pit will be constructed so that at least half of its total volume is in solid cut material (below natural ground level).



10. Reserve pits will be adequately fenced during and after drilling operations until pit is reclaimed so as to effectively keep out wildlife and livestock. Adequate fencing, in lieu of more stringent requirements by the surface owner, is defined as follows:
  - Construction materials will consist of steel or wood posts. Three or four strand wire (smooth or barbed) fence or hog panel (16-foot length by 50-inch height) or plastic snow fence must be used with connectors such as fence staples, quick-connect clips, hog rings, hose clamps, twisted wire, etc. Electric fences will not be allowed.
  - Construction standards: Posts shall be firmly set in ground. If wire is used it must be taut and evenly spaced, from ground level to top wire, to effectively keep out animals. Hog panels must be tied securely into posts and one another using fence staples, clamps, etc. Plastic snow fencing must be taut and sturdy. Fence must be at least 2-feet from edge of pit. 3 sides fenced before beginning drilling, the fourth side fenced immediately upon completion of drilling and prior to rig release. Fence must be left up and maintained in adequate condition until pit is closed.
11. Reserve pits will be closed as soon as possible, but no later than 90 days from time of drilling/well completion, unless the BLM Authorized Officer gives an extension. Squeezing of pit fluids and cuttings is prohibited. Pits must be dry of fluids or they must be removed via vac truck or other environmentally acceptable method prior to backfilling, recontouring and replacement of topsoil. Mud and cuttings left in pit must be buried at least 3-feet below recontoured grade. The operator will be responsible for recontouring any subsidence areas that develop from closing a pit before it is sufficiently dry.
12. Culverts will be placed on channel bottoms on firm, uniform beds, which have been shaped to accept them, and aligned parallel to the channel to minimize erosion. Backfill will be thoroughly compacted.
13. The minimum diameter for culverts will be 18 inches. However, all culverts will be appropriately sized in accordance with standards in BLM Manual 9113.
14. Construction and other project-related traffic will be restricted to approved routes. Cross-country vehicle travel will not be allowed.
15. Maximum design speed on all operator constructed and maintained roads will not exceed 25 miles per hour.
16. Pipeline construction shall not block nor change the natural course of any drainage. Pipelines shall cross perpendicular to drainages. Pipelines shall not be run parallel in drainage bottoms. Suspended pipelines shall provide adequate clearance for maximum runoff.
17. Pipeline trenches shall be compacted during backfilling. Pipeline trenches shall be routinely inspected and maintained to ensure proper settling, stabilization and reclamation.
18. During construction, emissions of particulate matter from well pad and road construction would be minimized by application of water or other non-saline dust suppressants with at least 50 percent control efficiency. Dust inhibitors (surfacing materials, non-saline dust suppressants, and water) will be used as necessary on unpaved roads that present a fugitive dust problem. The use of chemical dust suppressants on public surface will require prior approval from the BLM Authorized Officer.
19. Operators are required to obtain a National Pollution Discharge Elimination System (NPDES) Storm Water Permit from the Wyoming DEQ for any projects that disturb five or more acres (changing to

one acre in March 2005). This general construction storm water permit must be obtained from WDEQ prior to any surface disturbing activities and can be obtained by following directions on the WDEQ website at <http://deq.state.wy.us>. Further information can be obtained by contacting Barb Sahl at (307) 777-7570.

20. The operator shall submit a Sundry Notice (Form 3160-5) to BLM for approval prior to construction of any new surface disturbing activities that are not specifically addressed in the approved APD or POD Surface Use Plan.

### **Operations/Maintenance**

1. Confine all equipment and vehicles to the access road(s), pad(s), and area(s) specified in the approved APD or POD.
2. All waste, other than human waste and drilling fluids, will be contained in a portable trash cage. This waste will be transported to a State approved waste disposal site immediately upon completion of drilling operations. No trash or empty barrels will be placed in the reserve pit or buried on location. Operators and their contractors will comply with all state and local laws and regulations pertaining to disposal of human and solid waste will be complied with.
3. The operator will be responsible for prevention and control of noxious weeds and weeds of concern on all areas of surface disturbance associated with this project (well locations, roads, water management facilities, etc.) Use of pesticides shall comply with the applicable Federal and State laws. Pesticides shall be used only in accordance with their registered uses and within limitations imposed by the Secretary of Interior. Prior to the use of pesticides on public land, the holder shall obtain from the BLM authorized officer written approval of a plan showing the type and quantity of material to be used, pest(s) to be controlled, method of application, location of storage and disposal of containers, and any other information deemed necessary by the authorized officer to such use.
4. All permanent above-ground structures ( e.g. , production equipment, tanks, etc.) not subject to safety requirements will be painted to blend with the natural color of the landscape. The paint used will be a color which simulates "Standard Environmental Colors." The color selected for this project is (Covert Green).
5. Sewage shall be placed in a self-contained, chemically treated porta-potty on location.
6. The operator and their contractors shall ensure that all use, production, storage, transport and disposal of hazardous and extremely hazardous materials associated with the drilling, completion and production of these wells will be in accordance with all applicable existing or hereafter promulgated federal, state and local government rules, regulations and guidelines. All project-related activities involving hazardous materials will be conducted in a manner to minimize potential environmental impacts. In accordance with OSHA requirements, a file will be maintained onsite containing current Material Safety Data Sheets (MSDS) for all chemicals, compounds and/or substances which are used in the course of construction, drilling, completion and production operations.
7. Produced fluids shall be put in test tanks on location during completion work. Produced water will be put in the reserve pit during completion work per Onshore Oil and Gas Order #7.
8. The only fluids/waste materials which are authorized to go into the reserve pit are RCRA exempt exploration and production wastes. These include:

- drilling muds & cuttings
- rigwash
- excess cement and certain completion & stimulation fluids defined by EPA as exempt

It does not include drilling rig waste, such as:

- spent hydraulic fluids
- used engine oil
- used oil filter
- empty cement, drilling mud, or other product sacks
- empty paint, pipe dope, chemical or other product containers
- excess chemicals or chemical rinsate

Any evidence of non-exempt wastes being put into the reserve pit may result in the BLM Authorized Officer requiring specific testing and closure requirements.

9. The operator shall restrict travel on unimproved two-track roads during periods of inclement weather or spring thaw when the possibility exists for excessive surface resource damage (e.g., rutting in excess of 4-inches, travel outside two-track roadway, etc.).

### **Producing Well**

1. Landscape those areas not required for production to the surrounding topography as soon as possible. The fluids and mud must be dry in the reserve pit before re-contouring pit area. The operator will be responsible for re-contouring and reseeding of any subsidence areas that develop from closing a pit before it is completely dry.
2. Reduce the backslope to 2:1 and the foreslope to 3:1, unless otherwise directed by the BLM Authorized Officer. Reduce slopes by pulling fill material up from foreslope into the toe of cut slopes.
3. Any spilled or leaked oil, produced water or treatment chemicals must be reported in accordance with NTL-3A and immediately cleaned up in accordance with BLM requirements. This includes clean-up and proper disposition of soils contaminated as a result of such spills/leaks.
4. Distribute stockpiled topsoil evenly over those areas not required for production (ie., cut/fill slopes, road ditches, pipelines, etc.) and reseed with approved seed mix.
5. Upgrade and maintain access roads and drainage control (e.g., culverts, drainage dips, ditching, crowning, surfacing, etc.) as necessary and as directed by the BLM Authorized Officer to prevent soil erosion and accommodate safe, environmentally-sound access.
6. Prior to construction of production facilities not specifically addressed in the APD/POD, the operator shall submit a Sundry Notice to the BLM Authorized Officer for approval.

### **Reclamation/Dry Hole**

1. All disturbed lands associated with this project, including the pipelines, access roads, water management facilities, etc., will be expediently reclaimed and reseeded in accordance with the surface use plan and any pertinent site-specific COAs. All disturbed lands associated with this project (including the pipelines, access roads, water management facilities, etc.) will have initial reclamation activities (recontouring, ripping, re-spreading of topsoil, and reseeding) completed within 180 days of well plugging or the operator will apply for a Sundry Notice, Form 3160-5, for an extension specifying why the initial reclamation was not met and the schedule to meet it.
2. Disturbed lands will be re-contoured back to conform with existing undisturbed topography. No depressions will be left that trap water or form ponds.

3. The fluids and mud must be dry in the reserve pit before re-contouring pit area. The operator will be responsible for re-contouring of any subsidence areas that develop from closing a pit before it is completely dry. The plastic pit liner (if any) will be cut off below grade and properly disposed of at a state authorized landfill before beginning to re-contour the site.
4. Before the location has been reshaped and prior to redistributing the topsoil, the operator will rip or scarify the drilling area and access road on the contour, to a depth of at least 12 inches. The rippers are to be no farther than 24 inches apart.
5. Distribute the topsoil evenly over the entire location and other disturbed areas. Prepare the seedbed by disking following the contour.
6. Waterbars are to be constructed at least one (1) foot deep, on the contour with approximately two (2) feet of drop per 100 feet of waterbar to ensure drainage, and extended into established vegetation. All waterbars are to be constructed with the berm on the downhill side to prevent the soft material from silting in the trench. The initial waterbar should be constructed at the top of the backslope. Subsequent waterbars should follow the following general spacing guidelines:

<b>Slope (percent)</b>	<b>Spacing Interval (feet)</b>
< 2	200
2 - 4	100
4 - 5	75
> 5	50

7. The operator will drill seed on the contour to a depth of 0.5 inch, followed by cultipaction to compact the seedbed, preventing soil and seed losses. Broadcast seeding can be used instead of a drill, but the seed mix must be doubled. To maintain quality and purity, the current years tested, certified seed with a minimum germination rate of 80% and a minimum purity of 90% will be used. On BLM surface or in lieu of a different specific mix desired by the surface owner, use the following:

#### **Loamy Ecological Site Seed Mix**

<b>Species</b>	<b>% in Mix</b>	<b>Lbs PLS*</b>
<b><i>Western Wheatgrass</i></b> ( <i>Pascopyrum smithii</i> )/or <b><i>Thickspike Wheatgrass</i></b> ( <i>Elymus lanceolatus</i> ssp. <i>lanceolatus</i> )	30	3.6
<b><i>Bluebunch Wheatgrass</i></b> ( <i>Pseudoroegneria spicata</i> ssp. <i>Spicata</i> )	10	1.2
<b><i>Green needlegrass</i></b> ( <i>Nassella viridula</i> )	25	3.0
<b><i>Slender Wheatgrass</i></b> ( <i>Elymus trachycaulus</i> ssp. <i>trachycaulus</i> )	20	2.4
<b><i>Prairie coneflower</i></b> ( <i>Ratibida columnifera</i> )	5	0.6
<b><i>White or purple prairie clover</i></b> ( <i>Dalea candidum</i> , <i>purpureum</i> )	5	0.6
<b><i>Rocky Mountain beeplant</i></b> ( <i>Cleome serrulata</i> ) /or <b><i>American vetch</i></b> ( <i>Vicia americana</i> )	5	0.6
<b>Totals</b>	<b>100%</b>	<b>12 lbs/acre</b>

\*PLS = pure live seed

\*Northern Plains adapted species

\*Double this rate if broadcast seeding

### Sandy Ecological Site Seed Mix

Species	% in Mix	Lbs PLS*
<b>Thickspike Wheatgrass</b> ( <i>Elymus lanceolatus</i> ssp. <i>lanceolatus</i> )	25	3.0
<b>Prairie sandreed</b> ( <i>Calamovilfa longifolia</i> )	35	4.2
<b>Indian ricegrass</b> ( <i>Achnatherum hymenoides</i> )	25	3.0
<b>Prairie coneflower</b> ( <i>Ratibida columnifera</i> )	5	0.6
<b>White or purple prairie clover</b> ( <i>Dalea candidum</i> , <i>purpureum</i> )	5	0.6
<b>Scarlet Globemallow</b> ( <i>Sphaeralcea coccinea</i> ) / or <b>Blue flax</b> ( <i>Linum lewisii</i> )	5	0.6
<b>Totals</b>	<b>100%</b>	<b>12 lbs/acre</b>

\*PLS = pure live seed

\*Northern Plains adapted species

\*Double this rate if broadcast seeding

These are recommended seed mixes based on the native plant species listed in the NRCS Ecological Site descriptions, U.W. College of Agriculture and seed market availability.

8. BLM will not release the performance bond until the area has been successfully revegetated (evaluation will be made after the second complete growing season) and has met all other reclamation goals of the surface owner and surface management agency.
9. A Notice of Intent to Abandon and a Subsequent Report of Abandonment must be submitted for abandonment approval.
10. For performance bond release approval, a Final Abandonment Notice (with a surface owner release letter on split-estate) must be submitted prior to a final abandonment evaluation by BLM.
11. Phased reclamation plans will be submitted to BLM for approval prior to individual POD facility abandonment via a Notice of Intent (NOI) Sundry Notice. Individual facilities, such as well locations, pipelines, discharge points, impoundments, etc. need to be addressed in these plans as they are no longer needed. Individual items that will need to be addressed in reclamation plans include:
  - Pit closure (Close ASAP after suitably dry, but no later than 90 days from time of drilling unless an extension is given by BLM Authorized Officer.) BLM may require closure prior to 90 days in some cases due to land use or environmental concerns.
  - Configuration of reshaped topography, drainage systems, and other surface manipulations
  - Waste disposal
  - Revegetation methods, including specific seed mix (pounds pure live seed/acre) and soil treatments (seedbed preparation, fertilization, mulching, etc.). On private surface, the landowner should be consulted for the specific seed mix.
  - Other practices that will be used to reclaim and stabilize all disturbed areas, such as water bars, erosion fabric, hydro-mulching, etc.
  - An estimate of the timetables for beginning and completing various reclamation operations relative to weather and local land uses.
  - Methods and measures that will be used to control noxious weeds, addressing both ingress and egress to the individual well or POD.
  - Decommissioning/removal of all surface facilities
  - Closure and reclamation of areas utilized or impacted by produced CBNG water, including discharge points, reservoirs, off-channel pits, land application areas, livestock/wildlife watering facilities, surface discharge stream channels, etc.

12. Soil fertility testing and the addition of soil amendments may be required to stabilize some disturbed lands.
13. Any mulch utilized for reclamation needs to be certified weed free.